

REMARKS

The Office Action dated October 2, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-16 are currently pending in the application, of which claims 1, 10, and 14-16 are independent claims. Claim 1-16 have been amended to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 1-16 are respectfully submitted for consideration.

Claims 1-16 were rejected under 35 U.S.C. 102(a) as being anticipated by Sp-002295002, "Seamless Handoff of Mobile Terminal from WLAN to cdma2000 Network" of Parikh et al. ("Parikh"). Applicants respectfully traverse this rejection.

Claim 1, upon which claims 2-9 depend, is directed to a method including ensuring continuity of a communication session when a user equipment hands over from a first communication network to a second communication network. The method also includes performing an authentication procedure for a packet data session with the second communication network while the user equipment is still connected to the first communication network. The method further includes simultaneously performing a packet data protocol session establishment procedure with the second communication network while the user equipment still connected to the first communication network.

Claim 10, upon which claims 11-13 depend, is directed to a method including ensuring continuity of a communication session. The method also includes handing over

by a user equipment from a first communication network to a second communication network. The method further includes, when the user equipment hands over from the first communication network to the second communication network, maintaining an attachment of the user equipment to the first communication network after the user equipment moves away from a coverage area of the first communication network for a predetermined time in order to allow the user equipment to return to the first communication network without having to repeat an authentication procedure and a packet data session establishment procedure before handing over to the second network.

Claim 14 is directed to a communication system including a user equipment, a first communication network, and a second cellular communication network. The system is configured to enable continuity of a communication session when a user equipment moves from a coverage area of the first communication network to a coverage area of a second cellular communication network. The system is also configured to simultaneously perform an authentication procedure for a packet data session with the second cellular communication network and a packet data protocol session establishment procedure with the second cellular communication network, while the user equipment is still attached to the first communication network.

Claim 15 is directed to a communication system including ensuring means for ensuring continuity of a communication session when a user equipment hands over from a first communication network to a second cellular communication network. The communication system also includes first performing means for performing an

authentication procedure for a packet data session with a second communication network while still being attached to a first communication network. The communication system further includes second performing means for simultaneously performing a packet data protocol session establishment procedure with the second cellular communication network while still being attached to the first communication network.

Claim 16 is directed to a communication system including an authentication unit configured to conduct an authentication procedure for a packet data session between a first and second communication networks when a user equipment hands off from the first communication network to the second communication network, the authentication procedure being conducted while the user equipment is still attached to a first communication network. The communication system also includes an establishment unit configured to simultaneously perform a packet data protocol session establishment procedure with the second communication network while still being attached to the first communication network.

Applicants respectfully submit that Parikh fails to disclose or suggest all of the elements of any of the presently pending claims.

Parikh discusses seamless handoff of a mobile terminal from a WLAN to a CDMA2000 network. The handoff process of Parikh includes sending a proxy router solicitation message to an access router, which sends a router solicitation to the packet data support node. The mobile terminal arranges to transfer the bearer content (information required to establish access network bearers in the CDMA2000 network for

the mobile terminal's ongoing sessions) to the packet data support node via the access router. The bearer content may be piggybacked onto the fast handoff signaling or it may be transferred in a separate message. The packet data support node responds to the message using the router advertisement that is forwarded to the mobile terminal via the access router. The mobile terminal responds by sending a registration request to the packet data support node via the access router. This registration request contains the network address identifier, authentication data, etc.

Upon receipt of the registration request, the packet data support node uses the network address identifier to determine the home AAA domain of the mobile terminal and queries the home domain via a broker forward process, for example, to obtain service authorization and authentication. The home AAA sends the response and includes a ticket with encrypted information therein, and the packet data support node stores the ticket and sends it to the mobile terminal via the access router along with any required configuration parameters. The handoff process of Parikh continues with the mobile terminal sending an acknowledge message to the packet data support node via the access router and includes the ticket for security and service authorization processes. While the mobile terminal is waiting, the CDMA2000 network performs bearer setup and the packet data support node performs registration with the home agent. Upon receiving the registration reply from the home agent, the packet data support node forwards it to the mobile terminal on one of the established access bearers.

However, review of Parikh reveals that there is no teaching or disclosure of “simultaneously performing a packet data session establishment procedure with the second communication network while still being attached to the first communication network” (emphasis added), as recited in claim 1.

In certain embodiments of the present invention, pre-authentication in the UMTS system is included, along with the set up of the IP connectivity, and the packet data session establishment processes for the second network are conducted “simultaneously” while still being connected to the first network.

In contrast, Parikh discloses only that the pre-authentication process can be carried out while still being connected to the first communication network, which is described with respect to steps 2 to 4 in Figure 4 of Parikh. The actual L2 authentication, which is different from pre-authentication, is carried out in step 5 (see Figure 4) of Parikh. The IP bearer establishment is then carried out in steps 6 and 7 of Parikh. However, nowhere in Parikh is there a teaching or suggestion of simultaneously performing a packet data session establishment procedure with the second communication network while still being attached to the first communication network.

Rather, in Parikh only the pre-authentication process is carried out while still being attached to the first communication network, while in the recitations of claim 1, the pre-authentication and the PDP context establishment are carried out while still being attached to the first communication network. The claimed method can result in a shorter handoff time, as the PDP context establishment (step 6 in Parikh) does not need to be

executed, as well as step 7, after moving to the second communication network. The idea of carrying out both authentication and PDP context establishment while still connected to the first communication network and then performing handoff, is not taught or disclosed by Parikh.

Further, Applicants refer to section 4.1 of Parikh, with reference to Figure 4 (the portion cited and relied upon in the Office Action), where Parikh describes phase 2 of the handoff process as being carried out after moving the second communication network. Applicants again note that claim 1 expressly recites “performing an authentication procedure for a packet data session with a second communication network while still being attached to a first communication network,” which is not taught or disclosed by Parikh. In this phase, the network performs the bearer setup (step 6) and performs the registration procedure (step 7). Thus, the method of Parikh requires PDP context establishment to be carried out after having moved to the UMTS domain.

Therefore, it appears that the Office Action has misinterpreted which steps of the handoff scheme in Parikh are carried out while the mobile remains connected to the first communication network, as the above-identified portions of Parikh indicate that the packet data session establishment procedure is performed after moving to the second communication network. Therefore, Applicants submit that Parikh fails to teach or disclose each and every feature recited in claim 1, and as such, reconsideration and withdrawal of the rejection of claim 1, along with dependent claims 2-9, is respectfully requested.

With regard to the rejection of claim 10 over Parikh, Applicants submit that Parikh again fails to teach or disclose each and every limitation recited in claim 10. More particularly, claim 10 recites “maintaining an attachment of the user equipment to the second cellular communication network after the user equipment moves away from a coverage area of the second cellular communication network for a predetermined time in order to allow the user equipment to return to the second cellular communication network without having to repeat an authentication procedure and a packet data session establishment procedure before handing over to the second network,” which is not taught or disclosed by Parikh. Further, although the term “simultaneously” is not expressly recited in claim 10, the language of the claim indicates that the packet data session establishment procedure is conducted while still being in communication with the previous communication network. Therefore, Applicants submit that Parikh fails to teach or disclose each and every limitation recited in claim 10 as supported by the explanation provided above with respect to claim 1, and, as such, reconsideration and withdrawal of the rejection of claim 10, along with dependent claims 11-13, is respectfully requested.


Independent claims 14-16 each have their own scope. However, claims 14-16 contain at least some features similar to those with respect to which claims 1 and 10 are distinguishable over Parikh. Accordingly, it is respectfully submitted that the distinctions presented above with respect to claims 1 and 10 also serve to demonstrate the insufficiency of Parikh as a basis for rejecting claims 14-16, and it is, therefore, respectfully requested that the rejection of claims 14-16 be withdrawn.

For the reasons explained above, it is respectfully submitted that each of claims 1-16 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-16 be allowed, and that this application be passed to issuance.

If, for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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Enclosures: Petition for Extension of Time